

AMENDMENTS TO THE CLAIMS

- Currently amended claims: 1, 22, 50, 70, and 77.

1. (Currently Amended) A method of determining the context of a computing device comprising:

determining whether any of a number of context providers are available to provide context information that can be processed by the computing device to [[ascertains]] ascertain its context by polling one or more of the context providers; receiving context information from one or more of the context providers that are determined to be available; and

processing the context information on the computing device to determine the context of the computing device, wherein the processing of the information comprises:

mapping the context information to a node on a hierarchical tree structure that is carried on the device, the hierarchical tree structure comprising multiple nodes that represent physical or logical entities; and

traversing one or more nodes of the tree structure to ascertain a complete context, wherein the processing of the context information further comprises ordering the context providers in accordance with a trust parameter that is assigned to each context provider and defines a level of trust associated with the context provider, and a confidence parameter that provides a measure of a context provider's confidence in its context information;

determining whether there are any conflicts with the context information and, if so, selecting only context information from certain ordered context providers; and

decreasing, over time, the confidence parameter associated with a previously determined current context.

2. (Allowed) The method of claim 1, wherein the computing device is a mobile computing device.

3. (Allowed) The method of claim 1, wherein the computing device is a handheld mobile computing device.

4. (Canceled).

5. (Allowed) The method of claim 1, wherein the traversing comprises traversing multiple hierarchical tree structures that are carried on the device.

6. (Allowed) The method of claim 5, wherein the tree structures are linked.

7. (Allowed) The method of claim 5, wherein one of the tree structures comprises nodes that represent geographical divisions of the Earth.

8. (Allowed) The method of claim 5, wherein one of the tree structures comprises nodes that represent geographical divisions of the Earth, and another of the tree structures comprises nodes that represent an organization-specific structure.

9. (Canceled).

10. (Canceled).

11. (Allowed) The method of claim 1, wherein the computing device is configured to receive events that pertain to the status of the context providers.

12. (Allowed) The method of claim 1 further comprising using a previously determined current context if no context providers are determined to be available.

13. (Canceled).

14. (Allowed) The method of claim 12 further comprising continuing to determine whether any of a number of context providers are available.

15. (Allowed) The method of claim 14, wherein the using of the previously determined current context can continue until one or more context providers are determined to be available.

16. (Canceled).

17. (Canceled).

18. (Canceled).

19. (Canceled).

20. (Canceled).

21. (Canceled).

22. (Currently Amended) One or more computer-readable media having computer-readable instructions thereon which, when executed by a computing device, cause the computing device to:

determine whether any of a number of context providers are available to provide context information that can be processed by the computing device to ascertain its context by polling one or more of the context providers;

receive context information from one or more of the context providers that are determined to be available; and

process the context information on the computing device to determine the context of the computing device by:

mapping the context information to a ~~[[nude]]~~ node on a hierarchical tree structure that is carried ~~[[one]]~~ on the device, the hierarchical tree structure comprising multiple nodes that represent physical or logical ~~entities~~ entities; and
traversing one or more nodes of the tree structure to ascertain a complete context,

wherein the context information is processed by further: ordering the context providers in accordance with a trust parameter that is assigned to each context provider and defines a level of trust associated with the context provider, and a confidence parameter that provides a measure of a context provider's confidence in its context information;

determining whether there are any conflicts with the context information and, if so, selecting only context information from certain ordered context providers; and

decreasing, over time, the confidence parameter associated with a previously determined current context.

23. (Allowed) The computer-readable media of claim 22, wherein the computing device comprises a mobile computing device.

24. (Allowed) The computer-readable media of claim 22, wherein the computing device comprises a handheld mobile computing device.

25. (Canceled).

26. (Allowed) The computer-readable media of claims 22, the traversing comprises traversing multiple hierarchical tree structures that are carried on the device.

27. (Allowed) The computer-readable media of claim 26, wherein the tree structures are linked.

28. (Allowed) The computer-readable media of claim 26, wherein one of the tree structures comprises nodes that represent geographical divisions of the Earth.

29. (Allowed) The computer-readable media of claim 26, wherein one of the tree structures comprises nodes that represent geographical divisions of the Earth, and another of the tree structures comprises nodes that represent an organization-specific structure.

30. (Allowed) A method of determining the location of a computing device comprising:

determining whether any of a number of location providers are available to provide location information that can be processed by the computing device to ascertain its location by polling one or more of the location providers;

receiving location information from one or more of the location providers that are determined to be available; and

processing the location information on the computing device to determine the location of the computing device, wherein the processing of the information comprises:

mapping the location information to a node on a hierarchical tree structure that is carried on the device, the hierarchical tree structure comprising multiple nodes that represent physical or logical entities; and

traversing one or more nodes of the tree structure to ascertain a complete location,

wherein the processing of the location information further comprises:

ordering the location providers in accordance with a trust parameter that is assigned to each location provider and defines a level of trust associated with the location provider, and a confidence parameter that provides a measure of a location provider's confidence in its location information;

determining whether there are any conflicts with the location information and, if so, selecting only location information from certain ordered location providers; and

decreasing, over time, the confidence parameter associated with a previously determined current location.

31. (Allowed) The method of claim 30, wherein the computing device comprises a mobile computing device.

32. (Allowed) The method of claim 30, wherein the computing device comprises a handheld mobile computing device.

33. (Canceled).

34. (Allowed) The method of claim 30, wherein the traversing comprises traversing multiple hierarchical tree structures that are carried on the device.

35. (Allowed) The method of claim 34, wherein the tree structures are linked.

36. (Allowed) The method of claim 34, wherein one of the tree structures comprises nodes that represent geographical divisions of the Earth.

37. (Allowed) The method of claim 34, wherein one of the tree structures comprises nodes that represent geographical divisions of the Earth, and another of the tree structures comprises nodes that represent an organization-specific structure.

38. (Canceled).

39. (Canceled).

40. (Allowed) The method of claim 30 further comprising using a previously determined current location if no location providers are determined to be available.

41. (Canceled).

42. (Allowed) The method of claim 40 further comprising continuing to determine whether any of a number of location providers are available.

43. (Allowed) The method of claim 42, wherein the using of the previously determined current location can continue until one or more location providers are determined to be available.

44. (Canceled).

45. (Canceled).

46. (Canceled).

47. (Canceled).

48. (Canceled).

49. (Canceled).

50. (Currently Amended) One or more computer-readable media having computer-readable instructions thereon which, when executed by a computing device, cause the computing device to:

determine whether any of a number of location providers are available to provide location information that can be processed by the computing device to ascertain its location by polling one or more of the location providers;

receive location information from one or more of the location providers that are determined to be available; and

process the location information on the computing device to determine the location of the computing device by:

mapping the context information to a node on a hierarchical tree structure that is carried on the device, the hierarchical tree structure comprising multiple nodes that represent physical or logical entities; and

traversing one or more[[,]] nodes of the tree structure to ascertain a context,

wherein the location information is further processed by:

ordering the location providers in accordance with a trust parameter that is assigned to each location provider and defines a level of trust associated with the location provider, and a confidence parameter that provides a measure of a location provider's confidence in its location information;

determining whether there are any conflicts with the location information and, if so, selecting only location information from certain ordered location providers; and

decreasing, over time, the confidence parameter associated with a previously determined current location.

51. (Allowed) The computer-readable media of claim 50, wherein the computing device comprises a mobile computing device.

52. (Allowed) The computer-readable media of claim 50, wherein the computing device comprises a handheld mobile computing device.

53. (Canceled).

54. (Allowed) The computer-readable media of claim 50, wherein the traversing comprises traversing multiple hierarchical tree structures that are carried on the device.

55. (Allowed) The computer-readable media of claim 54, wherein the tree structures are linked.

56. (Allowed) The computer-readable media of claim 54, wherein one of the tree structures comprises nodes that represent geographical divisions of the Earth.

57. (Allowed) The computer-readable media of claim 54, wherein one of the tree structures comprises nodes that represent geographical divisions of the Earth, and another of the tree structures comprises nodes that represent an organization-specific structure.

58. (Allowed) A computing device that embodies the computer-readable medium of claim 50.

59. (Allowed) A computing device that embodies the computer-readable medium of claim 53.

60. (Allowed) A computing device that embodies the computer-readable medium of claim 54.

61. (Allowed) A computing device that embodies the computer-readable medium of claim 55.

62. (Allowed) A computing device that embodies the computer-readable medium of claim 56.

63. (Allowed) A computing device that embodies the computer-readable medium of claim 57.

64. (Allowed) A mobile computing device that embodies the computer-readable medium of claim 50.

65. (Allowed) A mobile computing device that embodies the computer-readable medium of claim 50.

66. (Allowed) A mobile computing device that embodies the computer-readable medium of claim 54.

67. (Allowed) A mobile computing device that embodies the computer-readable medium of claim 55.

68. (Allowed) A mobile computing device that embodies the computer-readable medium of claim 56.

69. (Allowed) A mobile computing device that embodies the computer-readable medium of claim 57.

70. (Currently Amended) A method of determining a current context of a computing device comprising:

determining a current ~~Context~~ context of the device by:

determining whether any of a number of context providers are available to provide context information that can be processed by polling ~~[[ore]]~~ one or more context providers;

receiving context information from multiple different context providers;

mapping the context information to a node of a hierarchical tree structure that is carried by the device and having multiple nodes each of which represent a physical or logical entity; and

traversing the hierarchical tree structure to ascertain a complete device context;

receiving additional context information from one or more context providers; and

updating the current context of the device by:

mapping the context information to a node of the hierarchical tree structure that is carried by the device; and

traversing the hierarchical tree structure to ascertain a complete device context;

and further comprising:

ordering the context providers in accordance with a trust parameter that is assigned to each context provider and defines a level of trust associated with the context provider, and a confidence parameter that provides a measure of a context provider's confidence in its context information;

determining whether there are any conflicts with the context information and, if so, selecting only context information from certain ordered context providers; and

decreasing, over time, the confidence parameter associated with a previously determined current context.

71. (Allowed) The method of claim 70 further comprising determining whether there are any conflicts in the additional context information and, if so, resolving the conflicts prior to updating the current context of the device.

72. (Allowed) The method of claim 71, wherein conflicts are resolved on the basis of a trust parameter that is associated with each of the context providers.

73. (Allowed) The method of claim 71, wherein conflicts are resolved on the basis of physical world constraints to travel.

74. (Allowed) The method of claim 70, wherein the context comprises location.

75. (Allowed) The method of claim 74, wherein the device is a hand-held device.

76. (Allowed) One or more computer-readable media having computer-readable instructions thereon which, when executed by the computing device, cause the computing device to implement claim 70.

77. (Currently Amended) A computing device comprising:
a computer-readable medium; and

a context service module on the computer-readable medium and configured to process information from multiple different context providers to determine a current device context, the context service module being configured to:

- determine whether any of a number of context providers are available to provide context information that can be processed by the computing device to ascertain its context by ~~polling~~ polling one or more of the context ~~provider~~ providers; receive context information from one or more of the context providers that are determined by the device to be available; and

- process the context information on the computing device to determine the context of the computing device by:

 - mapping the context information to a node on a hierarchical tree structure that is carried on the device, the hierarchical tree structure comprising multiple nodes that represent physical or logical entities; and

 - traversing one or more nodes of the tree structure to ascertain a complete context,

- wherein the context information is processed by further:

 - ordering the context providers in accordance with a trust parameter that is assigned to each context provider and defines a level of trust associated with the context provider, and a confidence parameter that provides a measure of a context provider's confidence in its context information;

determining whether there are any conflicts with the context information and, if so, selecting only context information from certain ordered context providers; and

decreasing, over time, the confidence parameter associated with a previously determined current context.

78. (Allowed) The computing device of claim 77 embodied as a mobile computing device.

79. (Allowed) The computing device of claim 77 embodied as a handheld computing device.

80. (Canceled).